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AARI

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FLUOROCARBONS AND THE OZONE LAYER

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**MONTREAL PROTOCOL
ON SUBSTANCES
THAT DEPLETE THE
OZONE LAYER**

1987

HISTORICAL PERSPECTIVE

early 1970s First concerns about the ozone layer
(NO_x emissions from supersonic transporters)

June 1974 Ozone depletion theory (Rowland and Molina)

March 1977 UNEP establishes CCOL

May 1977 UNEP Governing Council adopts the World Plan of Action
on the ozone layer

March 1980 Canada prohibits the use of CFCs in hairsprays, deodorants
and anti-perspirants

May 1981 UNEP initiates international negotiations aimed at the
elaboration of a global convention to protect the
ozone layer

22 March 1985 VIENNA CONVENTION for the Protection of the Ozone Layer
signatories: 20 countries + EEC (10 countries)

4 June 1986 Canada is the first country to ratify the Vienna Convention

16 Sept. 1987 MONTREAL PROTOCOL on Substances that deplete the Ozone Layer
signatories: 24 countries + EEC (12 countries)

KEY FEATURES
of the
MONTREAL PROTOCOL

1. SCOPE Group I (CFC): 11, 12, 113, 114, 115
 Group II (HALON): 1211, 1301, 2402

2. CONTROL MECHANISM $C = P + I - E$

3. CONTROL PLAN #short term: A) mandated freeze (HALON)
 B) mandated phasedown (CFC)
 - freeze
 - 20% reduction
 - 30% additional reduction
 #long term: periodic review (every 4 years)

4. TRADE SANCTIONS (Non-Parties)

- (a) "bulk" regulated substances
- (b) products containing (a)
- (c) products manufactured with (a)

5. EQUITY CLAUSES

- (a) developing countries (0.3 kg per capita)
- (b) U.S.S.R. (5 year plan)
- (c) small producers (25 kt)

6. ENTRY INTO FORCE

criteria: 11 ratifications
2/3 global 1986 production

date (anticipated): 1989-01-01

SCHEDULE

1989	Entry into force of the Protocol [article 16] (anticipated date: 1989-01-01)	
1990	EIF+6m. - EIF+18m. freeze (1986): consumption CFC $P \leq 1,10P$ (1986)* [article 2.1]	EIF+1 year ban imports of CFC/HALON from non-Parties [article 4.1]
1991		
1992	EIF+36m. - EIF+48m. freeze (1986): consumption HALON $P \leq 1,10P$ (1986)* [article 2.2]	EIF+3 years list of products containing CFC/HALON [article 4.3]
1993	January 1, 1993 exports of CFC/HALON to non-Parties no longer accounted for in calculations [article 3.c]	January 1, 1993 ban exports of CFC/HALON to non-Parties [article 4.2]
1994	July 1, 1993 - June 30, 1994 consumption CFC $\leq 80\%$ C (1986) $P \leq 1,10P$ (1986)* [article 2.3]	EIF+5 years control imports of products manufactured with CFC/HALON from non-Parties [article 4.4]
1995		
1996		
1997		
1998		assessment of control measures [article 6]
1999	July 1, 1998 - June 30, 1999 consumption CFC $\leq 50\%$ C(1986) $P \leq 1,15 P$ (1986) [article 2.4]	

* needs of developing countries / rationalization

IMPLEMENTATION PLAN

PHASE ONE - Promulgation of CEPA
 - Ratification of the Montreal Protocol
 - Control Options Report-I (May '88)
 # to meet the Protocol's requirements
 # "Quota system"

PHASE TWO - "Further and Faster"
 - Control Options Report-II (December '88)
 regulatory impact analysis
 - Proposed regulations (Early '89)

CFC AND HALON CONTROLS UNDER CEPA

TIMETABLE FOR KEY ELEMENTS

MAY 1988 - Promulgation of CEPA
 - Ratification of Montreal Protocol
 - Control Options Report - Phase I - released May 15 - options to meet Protocol requirements
 - SKEW Report - Part #1 released (industry structure)
 - Sole source contract to ABT consultants for SEIA on control options (Phase I) (they will continue work on RIA for selected Phase I option)

JUNE 1988 - CFC and Halon Use Pattern in Canada (EC survey report released - 1986 reference levels)
 Let contract for preparation of Phase II Control Options Report
 - Let contract for Use Pattern-Product Survey

JULY 1988 - SKEW Report Part 2 is released. (Detailed analysis of alternative chemicals, products, recycle etc.)
 Comments on Phase I Control Options Report received and processed
 - Contract let for Phase II Control Options Report SEIA

AUGUST 1988 - Senior management/Minister's briefing, etc.
 - Decision required on selected option - Phase I Product Survey Report released (background data for regulation development under Phase II)

SEPTEMBER 1988: - Canada Gazette, Part I - Selected Control Option - Phase I
 - RIA (for selected Control Option Phase I) released (Part 2 of ABT study shown under May 88)

OCTOBER 1988 - Comments on Canada Gazette Part I - (selected - Phase I Control Option) received and processed
 Control Options Report - Phase II (products, etc.) released
 - SEIA on Control Options Report - Phase II - released

NOVEMBER 1988: - Consideration of appeals
 - Ministerial decision

DECEMBER 1988: - Canada Gazette Part II on selected Phase I Control Option

JANUARY 1989: - Entry into force of the Montreal Protocol
 - Canada Gazette Part I on Phase II Controls

JULY 1989: - Freeze at 1986 levels takes effect.